(n = 81) or a double (n = 23) unrelated UCBT for an advanced lymphoid malignancy. Sixty-three patients had a non-Hodgkin lymphoma (18 diffuse large B-cell lymphoma, 10 follicular lymphoma, 8 mantle cell lymphoma, 8 peripheral T-cell lymphoma, 14 other T-cell lymphomas, 5 other B-cell lymphomas), 28 had Hodgkin lymphoma, and 13 had B-cell chronic lymphocytic leukemia (CLL). The majority of patients (85%) had advanced disease (relapse, refractory disease, partial remission or ≥3rd complete remission), and 54% had a prior autologous transplant. Based on antigen-level HLA-A and B and allele-level HLA-DRB1 typing, cord blood units were matched (9%) or mismatched at 1 (26%), 2 (59%) or 3 (6%) antigens. The median number of cells infused was 2.4×10^7 total nucleated cells (TNC)/kg for single transplants and 3.1×10^7 TNC/kg for double transplants. Conditioning regimen varied according to the transplant center, but 62% received a reduced-intensity conditioning (RIC). GVHD prophylaxis was achieved with cyclosporin and MMF in 48% of cases. Median follow-up time for survivors was 14 months. The probability of engraftment at day 60 was 86%, with a median time to engraft of 20 days (3–54). In a multivariate analysis, a higher cell dose (2.5×10^7 TNC/kg) was significantly associated with the neutrophil engraftment (p = 0.04). Grade II-IV acute graft-versus-host disease (GVHD) was observed in 24% of the patients. Transplant-related mortality (TRM) was 34% at 6 months. In a multivariate analysis, TRM was significantly lower for patients with B-cell malignancies (B-cell non-Hodgkin lymphomas and CLL) as compared to those with Hodgkin or T-cell lymphomas (21% vs. 49%; p = 0.005), patients who received TBI (25% vs. 49%; p = 0.04). Disease free survival (DFS) at 1 year was 40%. In a multivariate analysis, DFS was significantly better for patients with B-cell malignancies (54% vs. 21%; p = 0.006) and patients who received TBI (49% vs. 23%; p = 0.001). In conclusion, UCBT is a valuable alternative for patients with advanced non-Hodgkin lymphoma and CLL. B-cell malignancies and the use of TBI are associated with a significantly better outcome.

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CHARACTERISTICS AND OUTCOMES OF MULTIPLE MYELOMA PATIENTS ON HEMODIALYSIS UNDERGOING AUTOLOGOUS STEM CELL TRANSPLANTATION: ANALYSIS OF THE US RENAL DATABASE SYSTEM

Weiss, B.M.[1], Neff, R.T.[2], Verma, P.[3], Agodoa, L.[4], Abbott, K.C.[2,1] Walter Reed Army Medical Center, Washington, DC; [2] Walter Reed Army Medical Center, Washington, DC; [3] Womack Army Medical Center, Fort Bragg, NC; [4] National Institutes of Health, Bethesda, MD.

Background: Severe renal failure requiring hemodialysis (HD) complicates multiple myeloma (MM) in about 3% of cases. Although MM is not a contraindication to chronic dialysis, survival of MM patients on dialysis is lower than for other conditions such as diabetes. High dose chemotherapy and autologous stem cell transplantation (ASCT) is feasible and effective in MM patients on HD based on small, single center studies. **Methods:** We conducted a retrospective cohort study of U.S. Medicare primary payer dialysis patients with multiple myeloma as cause of end stage renal disease in the U.S. Renal Database System (USRDS) from January 1999 through December 2004 with follow-up through September 2005. Medicare claims for ASCT were based on ICD-9 codes. Logistic regression was used to assess factors independently associated with ASCT. Cox time-dependent regression was used to test whether ASCT was independently associated with survival in this cohort. **Results:** There were 3,307 MM patients, of whom 48 (1.5%) underwent ASCT. The mean age of ASCT patients was 60.9 yrs compared to 72.2 yrs in non-ASCT patients (p < 0.001). Factors that favored receiving ASCT by logistic regression were: younger age, higher serum albumin, lower hematocrit and more recent initiation of HD. Factors associated with survival (adjusted hazard ratios with 95% CI) include ASCT (0.598, 0.352–1.017), African-American (0.866, 0.777–0.964), albumin (0.86, 0.804–0.919), hematocrit, (0.987, 0.979–0.995), age (1.017, 1.012–1.022), and year of HD initiation, (0.848, 0.822–0.875). The 2-year survival for ASCT patients was 67.4% and for non-ASCT patients was 24.5%. **Conclusions:** MM patients on HD rarely undergo ASCT. The survival of MM patients on HD who do not receive a transplant is poor. The survival of MM patients on HD who undergo ASCT appears comparable to non-HD patients. Hemodialysis should not be an absolute contraindication to ASCT in MM.

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LONG-TERM OUTCOME OF NONMYELOALATIVE ALLOGRAFTING FROM HLA-IDENTICAL SIBLING FOR MULTIPLE MYELOMA (MM)

Rotta, M.[1,5], Storer, B.[1,2], Sahebi, F.[3], Shizuru, J.A.[4], Benedetto, B.[5], Lange, T.[6], Agura, E.D.[7], McSweeney, P.A.[8], Pulsipher, M.A.[9], Hari, P.[10], Maziarz, R.T.[11], Chauncey, T.[12], Appelbaum, F.R.[1,2], Sorror, M.L.[1,2], Bensinger, W.[1,2], Sandmaier, B.M.[1,2], Storb, R.F.[1,2], Maloney, D.G.[1,2] [1] Fred Hutchinson Cancer Research Center; [2] University of Washington; [3] City of Hope National Medical Center; [4] Stanford University; [5] University of Torino; [6] University of Leipzig; [7] Baylor University; [8] Rocky Mountain Cancer Center; [9] University of Utah; [10] Medical College of Wisconsin; [11] Oregon Health & Sciences University; [12] Puget Sound VA Medical Center.

Background: Allogeneic hematopoietic cell transplantation (HCT) following nonmyeloablative conditioning may be used with lower transplant-related mortality (TRM) in elderly patients (pts) and/or those with comorbidities. In this approach anti-tumor activity relies on *graft-versus-tumor* effects. Here we analyzed outcomes of nonmyeloablative allografts from HLA-identical sibling performed by a multicenter consortium in pts with multiple myeloma (MM) with a median follow up (FU) of 5 years(y). **Patients:** Between March 1998 and February 2007, 133 pts with stage II-III MM received alloHCT following 2 Gy TBI +/- fludarabine (48/133 pts). Median age was 52 (range 31–71) y. Forty-eight and 7 pts (36% and 5%) were older than 55 and 65 y, respectively, and 43% had HCT specific comorbidity scores >1. Median number of prior treatments was 1(range 1–6) and 44 pts (33%) received 2 or more lines of therapy. One hundred two pts (77%) received their allografts as consolidation following cytoreductive autografts (conditioning in 97% of pts: melphalan 200 mg/m^2). Postgrafting immunosuppression was mycophenolate mofetil (MMF) and cyclosporine (n = 116, 87%) or tacrolimus (n = 17, 13%). At allografting 86 pts (65%) had chemoresponsive disease with 33 and 53 pts (25% and 40%) in complete (CR) and partial remission (PR), respectively, while 32 and 15 pts (24% and 11%) had chemorefractory and progressive disease respectively. **Results:** Median FU for surviving pts was 5(range 0.3–8.5)y. Fifty four(41%) and 12 pts (9%) had grade 2 to 4 and 3 to 4 acute graft-versus-host-disease (GVHD); 86 pts (65%) had extensive chronic GVHD. The overall response rate was 89%, with 73(55%) and 46(34%) pts achieving CR and PR, respectively. Median time to progression was 3.6 y. Median progression-free survival (PFS) was 2.7 y, and 5-y estimated PFS was 28%. Nonrelapse mortalities (NRM) at 100 days, 1 and 5 y were 1%, 13% and 24%. Median overall survival (OS) was reached after 6.2 y, and 5-y estimated OS was 54%. In the subset of 102 pts who received a tandem auto/allografts, the median time to progression was 4 y, median PFS was 3 y while median OS has not been reached. In this group estimated PFS and OS at 3 and 5-years were 69% and 40%, 80% and 55% respectively. **Conclusion:** Nonmyeloablative allografting, in particular as part of a planned tandem auto/allo HCT protocol, is a treatment option for MM pts with HLA identical siblings. Future studies are aimed at improving long-term disease control and reducing GVHD.

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ALLOGENEIC HEMATOPOIETIC STEM CELL TRANSPLANTATION HAS CURATIVE POTENTIAL FOR CHEMOREFRACTORY NON-HODGKIN LYMPHOMA

Kato, K., Krijanovski, O., Khaled, Y., Peres, E., Reddy, P., Choi, S., Kitko, C., Yanik, G., Levine, J., Ferrara, J., Mineishi, S. University of Michigan, Ann Arbor, MI.

Background: Autologous hematopoietic stem cell transplantation (auto-HSCT) has been widely used in patients with relapsed chemosensitive non-Hodgkin lymphoma (NHL), but the prognosis of patients with chemorefractory NHL remains poor. We compared our experience of allo-HSCT with auto-HSCT for patients with NHL. **Methods:** A total of 377 patients with NHL underwent allo-HSCT (n = 172, median age: 49 years old, range 18–71) or auto-HSCT (n = 205, median age: 56 years old, range 3–71) between 1996 and 2006 at University of Michigan. Patients who underwent allo-HSCT for relapse after auto-HSCT were excluded. Chemorefractory disease is defined as stable or progressive disease